

ISSUE/TOPIC: A chemical associated with the production of products such as Teflon™ has been found in the Cape Fear River which is the source for several drinking water systems in the Wilmington, NC, area.

BACKGROUND:

- The Chemours (formerly DuPont) Fayetteville, NC, facility manufactures the chemical GenX, a processing aid that enables the production of high-performance fluoropolymers without the use of perfluorooctanoic acid (PFOA).
- A 2009 EPA-issued Toxic Substances Control Act (TSCA) Order allows production of GenX (an ammonium salt) and a GenX precursor chemical (a free acid), but requires additional toxicological risk information/studies be submitted to EPA (which has already been conducted and submitted to EPA), limits environmental releases, and establishes worker safety, distribution, and recordkeeping requirements.
- Typically, EPA investigates potential TSCA noncompliance through a review of production and environmental controls records required by any rule or order and, as needed, an on-site inspection. EPA may also use information requests to inform our investigation.
- When EPA conducted a risk assessment based on available toxicity data for GenX and analogous substances such as PFOA (also known as C8). The consent order required the company to conduct additional toxicity testing on GenX.
- There is no EPA drinking water health advisory level for GenX.

CURRENT STATUS:

- Wilmington, NC, is on the Cape Fear River, about 70 miles downstream from a Fayetteville, NC, Chemours GenX production facility. The free acid GenX precursor chemical has been found in the Wilmington, NC, drinking water system and other systems along the Cape Fear River.
- On June 21, 2017, the company began diverting remaining wastewater containing the contaminant into storage tanks to be shipped out of state for incineration; bearing the costs for water collection and testing.
- The Office of Enforcement and Compliance Assurance (OECA) and the Office of Chemical Safety and Pollution Prevention (OCSPP) requested, and EPA Region 4 (and OECA's contractor) conducted, an on-site inspection at the Chemours facility on June 28 and 29, 2017, to determine compliance with TSCA.
- On July 14, 2017, State officials released their first results of water quality samples and an updated preliminary health assessment for concentrations of GenX in finished, or treated, drinking water. Their revised health goal for exposure to GenX in drinking water is 140 nanograms per liter (also referred to as parts per trillion or ppt). Samples were analyzed at the EPA lab in Research Triangle Park and at Test America, a lab in Colorado under contract to Chemours. Data from samples collected in weeks 6 and 7 show that the most recent results of finished, or treated, water in all facilities and the Chemours outfall were below the health goal of 140 ppt.
- On July 17, 2017, Governor Cooper of NC sent a letter to Administrator Pruitt asking, among other things, that EPA expedite its internal evaluation of the risks posed by GenX.
- July 27 – EPA Region 4 joins NCDEQ on a site visit to the Chemours facility to gather information for state NPDES permit renewal.
- On July 28th and August 1st EPA Region 4 received information from Chemours based on an earlier information request during the June 28 – 29th TSCA inspection. The submitted information is currently being reviewed by Region 4 staff for compliance with TSCA.
- August 1 – NC Governor Cooper expands state science panel to address new or unregulated chemicals

- On August 15th, EPA Region 4 requested additional information from Chemours resulting from EPA's TSCA review of Chemours initial information submittal. The submission deadline for the recently requested information is August 23rd and September 1st.
- On August 22, 2017, Region 4 divisions participated in a meeting with OECA, and Office of Water to discuss the OECA Enforcement Options Paper. North Carolina water program is beginning to get some of the information from Chemours that was previously being held as TSCA CBI.
- On August 23, 2017, Region 4 discussed with ADEM Water Director an upcoming TSCA inspection of a facility in Decatur, AL that reports using the same chemical that is made in Chemours PPVE process. This inspection is being scheduled for mid-September with an information request to precede the onsite inspection.
- On August 28, 2017, ORD presented information to NC DEQ and DHHS on additional novel PFAS compounds discovered in the Cape Fear River. A report will be issued to NC and the Region soon.

NEXT STEPS:

- Region 4 will continue to evaluate information collected through the inspection process and will communicate with the State as the investigation progresses. The SEDS lab in Athens is working to be able to analyze for Gen X in the near future.

SUPPLEMENTAL GENX TIMELINE:

2007 – EPA ORD publishes its first research on PFAS in the Cape Fear River Basin in *Environmental Science & Technology*. Results provided evidence of multiple sources of PFAS throughout the entire Basin.

2008 – EPA receives GenX as a “new chemical notice” from DuPont (which is now Chemours). GenX is a replacement chemical for perfluorooctanoic acid (PFOA), which has an EPA-established health advisory level of 70 parts per trillion.

2009 – EPA enters into consent order with DuPont under TSCA for the production of GenX that requires DuPont to recover, capture, or recycle GenX from air emissions and water discharges at the company's facilities in the US at a rate of 99%. EPA determined that GenX could go on the market if the conditions of the consent order were met.

2009 – Present – EPA scientists from ORD continue research into PFAS including GenX.

2015 – ORD research is published describing new PFAS compounds discovered in the Cape Fear River. One of the many new compounds is “undecafluoro-2-methyl-3-oxahexanoic acid”, which ultimately becomes more commonly known as “GenX”.

2016 – Peer-reviewed journal article by EPA scientists in *Environmental Science & Technology Letters* reports findings of GenX in drinking water for the first time.

2017 (June 20, 2017) – EPA formally announces to the media that it has started an investigation into Chemours' compliance with the 2009 consent order. This investigation will allow EPA to determine whether they are in compliance with the consent order to control releases at the Fayetteville, NC facility.

2017 – North Carolina Department of Environmental Quality (NCDEQ) requests EPA to analyze 6 rounds of water samples being collected at 13 locations in the Cape Fear river. Results of the analysis of the first three rounds of sampling were shared with NCDEQ on July 13, 2017. Analysis of the additional three rounds of sampling will be available later this summer.

2017 – EPA OCSPP is in the process of reviewing the additional toxicity data submitted by the company as required under the consent order and updating the Risk Assessment using the additional toxicity data specific to GenX.

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